

organisms could be isolated from the sap—the infectious nature of which he also proved—which will reproduce the disease, and since the same sap filtered through porcelain still infects the plants, unless it was previously sterilised by heating, the causal agent must be a *contagium vivum fluidum*—a something of the nature of a poisonous enzyme, which not only diffuses through the plant-membranes—*e.g.* the cell-walls of root-hairs—but increases as it passes from cell to cell.

Koning confirms Beijerinck's principal results, but concludes that since the infecting fluid may be heated to 100° C. for a few minutes without losing its powers, whereas alcohol and glycerine destroy the virulence, as also does repeated filtration through porcelain, the active agent is an extremely minute organism, which can traverse the pores of a filter. He compares the results with those obtained with the virus of various animal diseases from which no organism has as yet been isolated.

It should be borne in mind that the existence of organisms small enough to pass through a porcelain filter has been accepted by several authorities.

When we reflect that well-studied micrococci are only 0.5–0.8 μ in diameter, and that the wave-length of those light rays corresponding to the sodium-line D is about 0.6 μ , some of these matters become less astounding: organisms 1/5th to 1/10th this size would probably be well beyond the powers of our best lenses, and would roll through the pores of a filter as shot through the meshes of a sieve.

It thus appears that—without regarding the work as quite conclusive, which it is not—we have here important contributions to several most weighty biological questions centred about the culture of an economic plant.

NOTES.

THE International Congress of Botany was opened in Paris on the 1st inst., and was in session until Tuesday last. M. Prillieux was the president.

THE new science laboratories at King's College, London, are to be opened on the 30th inst. by Lord Lister.

ANOTHER death from plague has occurred in Glasgow, bringing the number of fatal cases in hospital since the outbreak up to six. A fatal case of plague is also reported from Llandaff.

A REUTER telegram announces the arrival at Copenhagen, on October 4, of Lieut. Amdrup and all the members of his expedition. From July 18 to September 2 the expedition, while engaged on the coast of Greenland, explored and mapped out a stretch of land hitherto entirely unknown and extending from Cape Dalton, 69°28', to Aggas Island, 67°22'. Lieut. Amdrup is reported to have brought with him important collections, the results of his researches. The *Antarctic* reached Tasiusak on September 11, and sailed thence on her return journey on September 18.

THE *Athenaeum* states that the Kolthoff Arctic Expedition has succeeded in bringing to Sweden a male and a female calf of the musk ox (*Ovibos moschatus*, Gmelin). As soon as the animals appear to be acclimatised they are to be set free in the northern mountain regions, where it is thought they will speedily increase in number, as they are very prolific. Herr Kolthoff has great faith in the future importance of the musk ox, not so much as an article of food as on account of its thick brown wool, which is said to be remarkably strong.

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THE petrified remains of the extinct rhamphorhynchus have been discovered in the stone quarries of Eichstätt, Bavaria. It is stated that the teeth and fingers are very distinct, and that the membrane between the fingers is visible in places.

ACCORDING to the *Exchange Gazette* of St. Petersburg, the question of the official introduction of the metric system of weights and measures into Russia has been decided in principle in an affirmative sense. The Ministry of Finance is now considering in what manner, and when, the projected reform shall be carried out.

THE trustees of the American Medical Association have established a fund of 500 dollars, to be expended annually for the encouragement of scientific research; but no individual is to receive more than 100 dollars at one time.

THE lecture arrangements of the London Institution for the session terminating on February 28 next have now been completed. The science lectures are as follows:—"The Rise of Egyptian Civilisation," by Prof. Flinders Petrie; "The Earth's Beginning," by Sir Robert Ball; "The Earth's Earliest Inhabitants," by Prof. Grenville Cole; "The Caves of Jenolan," by Mr. F. Lambert; "The Tercentenary of the Science of Electricity," by Prof. Silvanus Thompson; "The Evolution of the Brain," by Dr. Alex. Hill; "Modern Aeronautics," by Mr. Eric S. Bruce; "The First Ascent of Mount Kenya," by Mr. H. J. MacKinder; "The Effect of Alcohol on the Nervous System," by Prof. Victor Horsley; "The Decorative Art of Primitive Peoples," by Prof. A. C. Haddon; and "Aquatic Autocrats and Fairies," by Mr. F. Enock. The Christmas course, intended for juveniles, is to be delivered by Prof. W. B. Bottomley, and will be devoted to "Structure and Colour," "Insect Visitors," "Unbidden Guests," and "Place in Nature."

THE next meeting of the Royal Microscopical Society will be held on Wednesday, the 17th inst., when Part ix. of a report on the recent Foraminifera of the Malay Archipelago will be presented. Preceding the meeting there will be an exhibition of slides and models of skin structure, by Mr. F. W. Watson Baker.

THE first monthly general meeting of the new session of the Institution of Mechanical Engineers will take place on Friday, October 19, when a paper, entitled "Observations on an Improved Glass Revealer for Studying Condensation in Steam Engine Cylinders and rendering the Effects Visible," will be read by Mr. Bryan Donkin, and discussed.

A new monthly meteorological journal has recently made its appearance in Holland, and bears the name of *Nederlandsch Tijdschrift voor Meteorologie*. The style of the journal is popular in character.

THE current *Geographical Journal* publishes further details as to the programme of Dr. Sven Hedin's journeys in Northern Tibet and neighbouring regions for the present year. At the time of sending his last letter, on June 27 last, the explorer was about to start for the Chamen Tagh, whither his caravan had already preceded him, his intention being to cross the Astyn Tagh and Koto-Shili ranges, so as to obtain a geological section of the country, and correct his route with that of his former Tibetan journey. After returning to his headquarters in the Chamen Tagh, he hoped to make his way across Northern Tsaidam to Sachu, and thence west to the old bed of Lob Nor, continuing his investigations of the latter end of the ruins in its vicinity. Thence he proposed to carry a chain of altimetric observations to Kara-koshun and Chaklik. He hoped to arrive at the last named point by about January 1, 1901.

A SLIGHT earthquake disturbance in Bombay, on Monday, September 17, is noted in the *Pioneer Mail*, Allahabad. Only one of the instruments at the Colaba Observatory recorded it. The disturbance began at about 3h. 48m. a.m., Bombay time, and reached its maximum at about 3h. 54m. The larger movements ceased at 4h. 2m., and the after-tremors at 4h. 16m. Thus the whole disturbance lasted fully 28 minutes. It was not a distant earthquake, nor was the movement large. The apparent distance of the origin from Bombay may have been about 500 miles. The same journal also records the occurrence, on September 10, of a slight earthquake shock in Madras.

THE New York correspondent of the *Lancet* states that the Chicago Board of Education has established a department called "Child-study and Pedagogic Investigation." The examination is undertaken for the purpose of determining the mental and physical status of the school-children. Examinations were at first limited to the determination in each pupil of the following points: Height, height sitting, weight, ergograph work, strength of grip right and left, hearing right and left, and acuity of vision. In addition to this, obvious developmental defects have been noted. The number of children examined down to the present time is 5636. The conclusions thus far reached are that there is a physical basis of precocity, that dull children are lighter and precocious children heavier than the average child, and that mediocrity of mind is associated with mediocrity of physique. A similar result was obtained in the examination of 33,500 school-children in St. Louis in 1892 by Dr. W. T. Porter. This is the first instance of a municipal board in America appropriating money for research work, and its effect may be far-reaching.

THE German Consul in Payta-Piara (Peru) reports the discovery of large rubber forests on the Niera River, a branch of the Amazon. An expedition has been organised to start for the interior to secure the right to collect the rubber. The increasing demand for rubber has drawn attention to the advantages of cultivating gutta—a leading product of Java and several of the neighbouring islands. A recent number of the *Straits Budget* points out that gutta trees growing wild cannot meet the growing demand which must soon outrun the supply unless gutta plantations extensive enough to meet future needs are laid out. Gutta leaves have been freely resorted to in order to eke out the supply. A company has recently been formed at Batavia to develop this branch of industry.

A LENGTHY account (based on the preliminary report presented to the R. Accademia dei Lincei) of Prof. Grassi's malaria experiment appears in the last number of the *British Medical Journal*, from which we glean the following particulars. In making the experiment, which took place in the plain of Capaccio, near Salerno, two objects were kept in view, viz., (1) To afford an absolute proof of the fact that malaria is transmitted exclusively by the bite of *Anopheles* mosquitoes; (2) to found on the results of recent research a code of rules to be adopted for freeing Italy from malaria in a few years. The experiment consisted in protecting from malaria railway employés and their families living in ten railway cottages and at the stations of S. Nicolò, Varco and Albanella, situated along the Battipaglia-Reggio Railway. They numbered 104 persons, including thirty-three children under ten years of age. Of these 104 individuals, at least eleven, including four children, had never suffered from the disease, not having previously lived in a malarious district; a certain number, it appeared, had not suffered from it for two or three years, and all the others, that is to say, the large majority, had suffered from it during the last malarial season, some of them even in the winter. During the malarial season, the health of the protected individuals was

good, with the exception of a few cases of bronchitis and a case of acute gastro-enteritis. None of these cases were treated with quinine. The 104 persons, with three exceptions, had remained free from malaria up to September 16th, the date of the report. From the report it is evident that the twofold object of the experiment has met with every success, and it certainly looks as if it will be possible to free Italy in a short time from malaria, and that the much dreaded plain of Capaccio (excepting for the *Anopheles* infected by malaria germs, from which one can easily protect himself) is one of the healthiest places in Italy.

THE current issue of the *British Medical Journal* gives particulars of the new bacteriological laboratory of the Melbourne University, at present in course of erection. The large hall of the laboratory will afford accommodation for eighty students. Situated on the ground floor there are four research laboratories and one preparation room specially fitted for the professor of pathology, who has, in addition, one room set apart for pathological-histological work and one for chemical pathology. Steam is laid on all over the building for both heating and sterilising purposes. One room has been set apart as a plague laboratory, having germ-proof windows and doors. The walls are covered with tiles made of opaque glass and the floor with lead, so that it can be flooded with antiseptics in case of accidents. In the building there are rooms devoted to microphotography, the preparation of media of all kinds for the sterilising and disinfecting of all utensils, and departments for numerous other purposes. The department is subsidised by the Board of Public Health, by the Ministry of Agriculture, by the Metropolitan Board of Works, by the City Council, and by other municipalities, who contribute between them about 800*l.* per annum. The duties of this bacteriological department consist in the examination of water and milk supply, of investigating diseases which are discovered at the abattoirs and amongst stock, and analysing the effluence from the sewage farm. It is also prepared to assist the Board of Public Health, on behalf of the medical profession, in diagnosing diphtheria, typhoid, tubercle and cases of plague. It is expected that the building will be opened in March next.

A NEW use for kites is brought under notice in the latest issue of the United States *Monthly Weather Review*. An exhibition has recently been given in Chicago showing how those within a besieged town or other inaccessible place can use the kite line to carry a telephone, with its separate telephone wire, through the air, and let it drop from the kite upon a distant place while the kite still remains in the air. By using a very large box kite and attaching to the kite line a little way below the kite a pulley through which runs the telephone wire, the telephone may be dropped from the pulley while the insulated wire keeps up the connection with the man at the kite reel. Of course, at the present time (as is pointed out in the *Review*), when kites have rarely been sent out with more than two miles of wire, which corresponds to a horizontal distance of much less than two miles, this method does not promise to put into communication persons separated by a great distance, but it may be very useful for short distances.

IN order to enable Essex dairy farmers and ladies engaged in dairying to gain an insight into agricultural education and the organisation and practice of the agricultural industries of Denmark, the Essex Technical Instruction Committee arranged a visit to that country in May last, when thirty-one persons spent a week there in visiting the agricultural schools, dairy farms, butter factories, &c. The excursion (judging from the careful report just issued from the County Technical Laboratories, Chelmsford) seems to have been in every way a great success. The members of the party were impressed with the thriving

condition of agriculture in Denmark, the happy position of which is attributed in the report to legislation, education and co-operation. Visits such as that under consideration cannot, if properly organised, fail to bring about useful results.

THOSE interested in the phylogeny of the Vertebrata will be pleased to hear of the discovery in the seas of Alaska of a new representative of the Enteropneusta, in the form of a species allied to the typical group of *Balanoglossus*. This new form, which it is proposed to call *Harrimania maculosa*, is described by Mr. W. E. Ritter in Part 2 of "Papers from the Harriman Alaska Expedition," now in course of publication in the serial last quoted. The new form leads its describer to conclude that the notochord of the Enteropneusta is undoubtedly homologous with that of the Vertebrata. It is specially noticeable in that it consists of two parts; the anterior corresponding with the same structure in the other members of the group, while the additional posterior moiety is connected with the œsophagus. This latter portion is peculiar in that it persists throughout life. *Harrimania*, which is considered to be the most primitive member of the group, instead of burrowing like *Balanoglossus*, lives under stones, where it often makes its way through the mud at the plane of contact between the latter and the stone beneath which it is concealed. While some examples were only found at extreme low tide, others occurred much nearer high-water mark than is the case with any other Enteropneusta.

THE last published number of the U.S. *Monthly Weather Review* (June) contains a note by Prof. E. B. Garriott on the extension of the Weather Bureau work, which constitutes one of the most substantial advances in the history of that institution. The West Indian branch was established in 1898, and at the present time practically all the cable islands and ports of the West Indies and the Caribbean coast of South America receive advices regarding tropical storms. The West Indian observing stations number thirteen, and hurricane warnings are displayed at more than a hundred points. Telegraphic reports are now also received from well-distributed Mexican stations. It is believed that the reports received from the northern and western parts of Mexico will lead to a better understanding of the important storms which sweep north-eastward from the tropical Pacific and cross the United States to the Atlantic. Reports from the extreme north-west of Canada have been added within the last two years and have furnished valuable data regarding the movements of North Pacific storms. The Weather Bureau has consequently reports from an area extending over more than 42° of latitude and 65° of longitude. The advantage afforded by these widespread telegraphic stations can hardly be over estimated.

THE *Philosophical Magazine* for October contains an interesting paper by Mr. R. J. A. Barnard, of Melbourne, on the annual march of temperature. The author has examined the observations for forty years at Melbourne and has divided them into two groups, 1859-78 and 1879-98. In each group the average for every day is obtained and smoothed twice by replacing the temperature of each day by the mean of the five consecutive days of which the particular day is the middle. The results of the second smoothing show that in the second week of March the temperature begins to drop rapidly, reaching a secondary minimum for each curve on the 19th. It then rises again to the extent of 2°·5 during the next week, reaching a maximum on the 25th and 26th, the data being the same again for both groups. The spells are not so marked as those found by Dr. Rijkevorsel for Europe, owing probably to the more uniform conditions of the southern hemisphere. The results show that a period of less than forty years is not likely to give any trustworthy information about spells, and that the division of

the observations for any particular place into groups of twenty years and the comparison of them in the way specified appear to be satisfactory methods of finding out whether such spells really exist.

THE rise and fall in the level of a lake, produced by the mechanical action of wind, is strikingly shown in a short paper contributed by Prof. A. J. Henry to the U.S. *Monthly Weather Review* for May. Continuous records of lake level at four points, viz. Amherstburg, Ontario, mouth of the Detroit River, and Buffalo Harbour, Lake Erie, were considered in conjunction with continuous records of wind direction and velocity and atmospheric pressure made at the Weather Bureau offices in Detroit and Buffalo; and a relation between the wind and water is clearly shown when the two sets of records are plotted under one another. It has been known for some years that general winds, as distinguished from local winds, blowing parallel to the longer axis of the main body of the lake, have a tendency to heap up the water at the end of the lake toward which they blow, and to depress it at the opposite end. Owing to the convergence of the shore lines at Buffalo, the heaping up of the waters in that harbour, under the influence of a south-westerly wind, becomes a serious menace to the safety of wharf and dock property. Likewise, owing to the shoal water at either end of the lake, a decrease in the available depth in the harbours and channels produces vexatious delays and frequent groundings.

PROF. HENRY'S examination of the facts referred to in the foregoing note shows that when high water exists at Amherstburg it is always low water at Buffalo. The synchronism of the times of high water and low water at the two places is almost perfect. The period of oscillation is likewise fairly constant, ranging from six to eight hours for a half oscillation, and from twelve to sixteen hours for a whole oscillation. The computed time of a whole oscillation, assuming the lake to have a mean depth of 50 feet, is, roughly speaking, seventeen hours. While the information on the subject is as yet too fragmentary to admit of drawing trustworthy conclusions, this much seems to be apparent: the oscillations are stationary rather than progressive. A wave of water is not propagated, in the ordinary sense of that word, from one end of the lake to the other, but the whole lake oscillates about a pivotal or nodal line, which, in the case of longitudinal oscillations, may be said to cross the lake about the longitude of Fairport, Ohio. Although there is no instrumental evidence of the fact, it may be assumed that, as in the case of similar oscillations in other land-locked bodies of water, the oscillations at the nodal line are zero, increasing to a maximum at the respective ends of the lake. Prof. Henry concludes by saying that it is within the range of probability that the occurrence of the more pronounced oscillations can be forecast by the Weather Bureau at no distant period.

To the *Entomologists' Monthly Magazine* for October, Mr. R. McLachlan contributes an abbreviated translation of an article, by M. A. Lancaster, on the swarms of a species of dragon-fly (*Libellula quadrimaculata*) which were observed in Belgium on June 5 and 10 last. On both occasions the temperature was very high, and the insects flew against the wind. The translator is of opinion that nothing certain in regard to the causes of these remarkable migrations has hitherto been ascertained. "As a rule," he writes, "the multitudes are so vast as to make it difficult to believe that all can have been bred within a very limited area. On the contrary, it rather looks as if the individuals in a certain initial locality, being seized with an uncontrollable migratory impulse, were progressively joined by others till the accumulations formed the ultimate swarm. A part of the second swarm seems to have reached England.

IN an exhaustive paper read before the Manchester Literary and Philosophical Society (*Memoirs*, vol. xlv. Pt. 4, pp. 1-8), Mr. Thomas Thorp describes his modification of the diffraction process of colour photography, first put forward by Prof. Wood. The difficulty of determining the correct degrees of rulings necessary for giving certain colours by Prof. Wood's arrangement is obviated by adjusting several copies of a grating having the same spacing at angles to each other, the angles giving the best colour combinations being found by experiment. Full details are given of the method of obtaining the celluloid copies from an original metal reflection grating. A diagram is included to illustrate the procedure for obtaining stereoscopic views with the apparatus.

IN the *Astrophysical Journal* (vol. xii. pp. 30-48), Herr J. Hartmann, of the Astrophysical Observatory at Potsdam, gives a useful and interesting series of suggestions on the design and critical adjustments of photographic spectrographs intended for observational work of a high degree of accuracy.

IN *Science* for September 28 is to be found an article on the "International Catalogue of Scientific Literature" from the pen of Sir Michael Foster, in which it is stated that more than forty-five complete sets of the work have already been subscribed for in the United States, and that, therefore, the catalogue will be begun at once.

MANY of our readers will be pleased to know that the recently delivered Huxley lecture of Lord Lister is to be had *in extenso* in both the *Lancet* and the *British Medical Journal* for Saturday last.

THE last part published (vol. xii. Part 4) of the *Journal* of the College of Science, Tokyo, gives evidence of the continued activity of the Japanese University in zoological research, in two valuable papers:—Further observations on the nuclear division of *Noctiluca*, by C. Ishikawa; and Notes on some exotic species of Ectoparasitic Trematodes, by Prof. S. Goto, both well illustrated. This number also contains the commencement of an enumeration, by T. Ito and Prof. J. Matsumura, of the flowering plants of the Lûchû Islands, the rich and interesting flora of which is at present but imperfectly known.

THE second volume of the elaborate "Cyclopedia of American Horticulture," by Prof. L. H. Bailey, Dr. W. Miller and others, has been published by Messrs. Macmillan and Co., Ltd. The volume extends from E to M, and is to be followed by two others. There will be more than two thousand original illustrations in the complete work, and the text will be on a proportionally large scale. The scope of this remarkable undertaking may be judged from the sub-title, which certifies that the complete work will comprise "suggestions for cultivation of horticultural plants, descriptions of the species of fruits, vegetables, flowers and ornamental plants sold in the United States and Canada, together with geographical and biographical sketches." Our review of the work will be deferred until the appearance of the final volume.

NEW editions of several established works have been recently received. The fifth edition of "Quantitative Chemical Analysis," by Dr. Frank Clowes and Prof. J. B. Coleman, has been issued by Messrs. J. and A. Churchill. The book provides a sound course of work both in manipulation and analysis, and is well in touch with modern methods. Among the additional matter we notice a description of a new and ingenious method of determining melting-points, a special apparatus for the rapid filtration and ignition of precipitates, and an improved form of condenser for use in the distillation of liquids.—The principles and practice of paper manufacture are presented in a form suitable for students in "A Text-book of Paper-Making," by C. F. Cross and E. J. Bevan (E. and F. N.

Spon) The second edition of the book has just appeared.—Another second edition is "Agricultural Zoology," by Prof. J. R. Bos, translated by Prof. J. R. Ainsworth Davis. An appendix has been added, containing an instructive statement of conditions which determine the appearance of harmful animals; also the general principles as to the means to be employed against them, and lists of pests classified according to their habitat. A full index has also been added.—Now that attention is being given to nature study in rural schools, Mrs. Brightwen's writings upon animal and plant life should receive additional admirers. Her books are of a kind that cannot be too widely known, so we are glad to see that Mr. Fisher Unwin has just issued new editions of "Wild Nature Won by Kindness" and "Glimpses into Plant Life."

THE "Memoirs and Correspondence of Lyon Playfair" was fully noticed in our issue for December 7 last, so that it is now unnecessary for us to do more than to state that a "popular" edition of the book has just been issued by Messrs. Cassell and Co., Ltd.

THE new issue of the *Journal* of the Royal Agricultural Society of England, contains, as usual, a number of interesting and valuable articles, among which may be mentioned an account, by Dr. Fream, of the York meeting of the society, "The Trials of Steam Diggers at York," and an obituary notice (with a page portrait after Herkomer) of Sir John Bennet Lawes.

Nature Notes for October mentions that an avocet was shot near Penzance in the spring.

IN the October number of the *Journal of Conchology*, Mr. A. G. Stubbs concludes his synopsis of the freshwater and land molluscs of the Tenby district.

IN the last annual "General Report of the Geological Survey of India," a voluminous book of 258 pages, the results of much industrious labour by the officers of the Survey are summarised. Considerable activity is being displayed in the prosecution of chemical and paleontological research, and the field-work has been directed towards elucidating economic questions as well as others purely geological. Part iii. of this work contains individual "progress reports" by various officers of the Survey, which consist of papers dealing, not only with economic matters such as auriferous reefs and coal-fields, but also with various questions of considerable geological interest.

UNDER the title of "A List of Works on North American Entomology," the U.S. Department of Agriculture, Division of Entomology, have issued, as No. 24 of the new series of their *Bulletin*, an extremely useful classified index to the most important publications relating to the various orders and families of North-American insects. It has been compiled under the direction of the entomologist, Dr. L. O. Howard, by his assistant, Mr. Nathan Banks. The idea is excellent and might well be adopted for other publications of a similar character respecting the insects of other countries. Such an index cannot be complete, but so many of the most important works on the subject are included that it will be easy for a student taking up the study of any special branch of North American insects to feel his way by this bibliography at the commencement and to enlarge his knowledge on a good foundation as he progresses.

THE latest part of the *Journal* of the Asiatic Society of Bengal (that issued on July 9) is wholly taken up with Sir George King's "Materials for a Flora of the Malayan Peninsula," a portion of which has been written by Dr. O. Stapf, of Kew.

IN addition to the usual "notes" and proceedings of Irish Societies, the October issue of the *Irish Naturalist* contains an interesting communication by Mr. C. B. Moffat, entitled "The Habits of the Hairy-armed Bat."

WE have received a copy of the *Papers and Proceedings* of the Royal Society of Tasmania for 1898-1899 (issued June 1900). It contains a useful list of Tasmanian mollusca, by Miss Lodder; several petrological papers, by Mr. W. H. Twelvetrees and Mr. W. F. Petterd, in which limurite, haiyne-trachyte, felsites, nephelinite and other rocks are described; also a note by the same authors on bones of Tasmanian labyrinthodonts. Numerous other natural history subjects are dealt with.

AMONG recent American and Colonial reprints we have to note the following:—Contributions to the U.S. National Herbarium, the plant covering of Ocracoke Island, by Thomas H. Kearney, jun.; and Stigmonose, a disease of carnations and other pinks, by Albert F. Woods; both issued by different divisions of the U.S. Department of Agriculture; Progress of plant breeding in the United States, by Herbert J. Webber and E. A. Bessey, reprinted from the year book of the U.S. Department of Agriculture for 1899; and Observations on the eucalypts of New South Wales, parts 5 and 6, by H. Deane and J. H. Maiden, from the *Proceedings* of the Linnean Society of New South Wales.

A SMALL pamphlet, issued by the Joint Agricultural Council of the East and West Ridings and of the Yorkshire College, containing a list of one hundred Yorkshire weeds, should be useful to farmers. It will be supplemented by a herbarium containing entire plants of the hundred weeds, and a cabinet containing their seeds or fruits, and will be followed by others.

IN the *Bulletin*, No. 3 (Petroleum Series), issued by the School of Mines, University of Wyoming, Mr. W. C. Knight gives an account of the oil-fields of Crook and Uinta counties. The geological features of the oil-yielding districts are briefly sketched and illustrated by maps and sections in the text. Tables showing the results of testing in various samples of oil are contributed by Mr. E. E. Slosson.

"NOTES on some Jurassic Plants in the Manchester Museum," by Mr. A. C. Seward, are published in the *Memoirs* of the Manchester Literary and Philosophical Society, vol. xlv. 1900, and reprinted in "Notes from the Manchester Museum," No. 6. The collection dealt with includes the plants figured by Lindley and Hutton, in addition to other specimens in the museum. The synonymy of numerous species is given, and a list of Inferior Oolite plants contained in the museum collections is also added. These notes are accompanied by four well-executed plates and a useful bibliography.

IN the *Mémoires du Musée Roy. d'Hist. Nat. de Belgique*, t. i. 1900, Mr. Seward describes the Wealden flora of Bernissart (Belgium). The plants described are obtained from a fresh-water deposit and are of a fragmentary nature; the flora is remarkable for the relatively large number of ferns included, while the cycads are absent and the conifers rare. Twenty species of plants are recognised, more than half of which are known also from England and Germany. The memoir is well illustrated by four plates and several text-figures.

SINCE the publication in our last number of a list of forthcoming science books, we have received the list of announcements of Mr. Gustav Fischer, of Jena. It is as follows:—"Atlas der topographischen Anatomie des Menschen," by Profs. Bardeleben and Haeckel, Zweite völlig umgearbeitete und vermehrte Auflage; "Organographie der Pflanzen, insbesondere der

Archegoniaten und Samenpflanzen," by Prof. Goebel, Zweiter Teil, 2 Heft, Erster Teil; "Klinisches Jahrbuch," Siebenter Band, Fünftes Heft; "Lehrbuch der vergleichenden Anatomie der wirbellosen Tiere," by Prof. A. Lang, Zweite umgearbeitete Auflage, Erste Lieferung, Mollusca; "Die Grundlagen und die Methoden für die mikroskopische Untersuchung von Pflanzenpulvern," by Prof. A. Meyer; "Aetiologie und Prophylaxe der Lungentuberkulose," by Dr. J. Ruhemann; "Anatomisch-klinische Vorträge aus dem Gebiete der Nervenpathologie," by Prof. K. Schaffer; "Praktikum der physiologischen Chemie," by Prof. Fr. N. Schulz; "Lehrbuch der Histologie und der mikroskopischen Anatomie des Menschen mit Einschluss der mikroskopischen Technik," by Prof. P. Stoehr, Neunte verbesserte Auflage; "Das Neuron in Anatomie und Physiologie," by Prof. Max Verworn.

Mr. H. K. Lewis promises the following new books:—"Blood and Blood Pressure," by Dr. G. Oliver; and new editions of "Hygiene and Public Health," by Dr. Louis Parkes; "Medical Electricity," by Dr. Lewis Jones; "The Student's Medical Dictionary" and "A Pocket Medical Dictionary," by Dr. G. M. Gould.

Messrs. Lovell Reeve and Co., Ltd., have in preparation a "Monograph of the Membracidae," by G. B. Buckton, F.R.S., who will be glad to hear, through the publishers, from entomologists and others as to specimens which they have reason to believe are as yet unknown to science.

Messrs. Williams and Norgate announce:—"The Opus Majus of Roger Bacon," edited with introduction and analytical table by J. H. Bridges.

MR. MARTINUS NIJHOFF, bookseller, of the Hague, has just issued the first part of his classified natural science catalogue containing nearly 2500 entries.

THE additions to the Zoological Society's Gardens during the past week include a Vervet Monkey (*Cercopithecus lalandii*) from South Africa, presented by Lieut. Sullivan; a Black-backed Jackal (*Canis mesomelas*) from South Africa, presented by Mr. J. E. Matcham; a Two-spotted Paradoxure (*Nandinia binotata*) from West Africa, presented by Mr. R. G. Pointer; a Vulpine Phalanger (*Trichosurus vulpecula*) from Australia, presented by Miss Bartlett; a Blue-faced Amazon (*Chrysotis versicolor*) from St. Lucia, West Indies, presented by Miss M. Moon; two Greek Tortoises (*Testudo graeca*), European, presented by Sister Heather Grey; a Chameleon (*Chamaeleon vulgaris*) from North Africa, presented by Mrs. E. Putz; a Bonnet Monkey (*Macacus sinicus*) from India, two Pucheran's Guinea Fowls (*Guttera pucherani*) from Somaliland; a Large Grieved Tortoise (*Podocnemis expansa*) from the Amazons; a Greek Tortoise (*Testudo graeca*), European, deposited; two Common Rattlesnakes (*Crotalus durissus*), two Water Vipers (*Ancistrodon piscivorus*), two Copper-head Vipers (*Ancistrodon contortrix*), two Mocassin Snakes (*Tropidonotus fasciatus*), a Hog-nosed Snake (*Heterodon platyrhinos*) from North America, received in exchange.

OUR ASTRONOMICAL COLUMN.

Ephemeris for observations of Eros.

1900.	R.A.			Decl.
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